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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/734,755	12/12/2003	Chung-Chi Chien	4444-0131P	1991

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EXAMINER

OSORIO, RICARDO

ART UNIT

PAPER NUMBER

2629

DATE MAILED: 07/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/734,755

Applicant(s)

CHIEN ET AL

Examiner

RICARDO L. OSORIO

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14 is/are allowed.
- 6) ☒ Claim(s) 1-9, 11-13, 15-23 and 25-27 is/are rejected.
- 7) ☒ Claim(s) 10, and 24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 4-7, 15-17, 20-23 are rejected under 35 U.S.C. 102(e) as being anticipated by Huppi et al. (6,776,497).

Regarding claims 1, 4, 5, 15, 20, and 21, Huppi teaches of a lighting module of a keyboard (see Fig. 1), said lighting module comprising a light source (Fig. 2, character 130); a light guide having a light-scattering surface (Fig. 2, character 212), said light guide has a thickness which decreases linearly from the first side (see Figs. 2 and 3, character (202); said light source locating on the first side of said light guide (See Fig. 2, character 130) and said light-scattering surface scattering light beams from said light source (col. 2, lines 9-18), wherein said light scattering surface has a plurality of light scattering protrusions having constant density (Fig. 4, character 402); and a reflector disposing under said light guide, said reflector reflecting said light beams from said light-scattering surface to illuminate a keyboard (col. 4, line 46-col. 5, line 18).

Regarding claims 6, 7, 22 and 23, Huppi teaches of said light-scattering protrusions having a shape of hemisphere or cube (col. 5, lines 6-11).

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Regarding claims 16-17, Huppi teaches of said keyboard being part of a notebook personal computer (see Fig. 4), or an independent keyboard used in desktop personal computers (col. 1, lines 10-40).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huppi in view of Juijve et al. (2005/0157971).

Regarding claims 3 and 19, Huppi does not specifically teach that the light source is an LED.

Juijve teaches that the light source is an LED (page 1, par. 7, lines 1-5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the LED, as taught by Juijve, in the device of Huppi because LEDs are well known light sources (page 1, par. 7, lines 1-5).

Claims 2, 11, 13, 18, 25, and 27, are rejected under 35 U.S.C. 103(a) as being unpatentable over Huppi in view of Nelson (6,609,805).

Regarding claims 2, 11, 13, 18, 25, and 27, further, Huppi does not precisely teach of a second light source located on a second side of the light guide, opposite to said first side, and said guide light having a constant thickness, and control circuit to control the light source.

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Nelson teaches of a second light source located on a second side of the light guide, opposite to said first side and the light guide has constant thickness (Fig. 4, character 42), and control circuit to control the light source (col. 3, lines 15-18).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the second light source and the light guide with constant thickness, as taught by Nelson, in the device of Huppi because it is a choice of the user/designer to have two light sources on each side of the light guide rather than one to have a multiple effect and to have better illumination and provides better light distribution when the light guide has constant thickness. Claims 12 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huppi in view of Osaka (6,023,277).

Regarding claims 12 and 26, Huppi does not teach of the light guide made of PMMA.

Osaka teaches of the light guide made of PMMA (col. 25, lines 13-15).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the PMMA light guide, as taught by Osaka, in the device of Huppi because PMMA is a commonly known material used for light guides.

Claim 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huppi.

Regarding claim 8, Huppi does not teach that the light-scattering protrusions are formed by printing or injection molding.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the light-scattering protrusions formed by printing, injection molding or any other known method because this methods or steps of manufacture are well known in the art of semiconductor manufacturing as being optionally used.

Allowable Subject Matter

5. Claims 10 and 24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Reasons for allowance are same as for allowed claim 14 (see below).

6. Claim 14 is allowed.

The following is an examiner's statement of reasons for allowance: Claim 14 is are allowable since certain key features of the claimed invention are not taught or fairly suggested by the prior art. In claim 14, "said light-scattering surface comprising a plurality of light-scattering protrusions having a density decreasing from said first side of said light guide to scatter light beams from said light source". The prior art used in the above rejection, singularly or in combination, fails to anticipate or render the above underlined limitations obvious.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ricardo L. Osorio whose telephone number is 571-272-7676. The examiner can normally be reached on Monday through Thursday from 7:00 A.M. to 5:30 P.M. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala whose telephone number is 571-272-7681.

Any response to this action should be mailed to:

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Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to: 571-273-8300 (for Technology Center 2600 only)

Hand-delivered responses should be brought to the Customer Service Window at the Randolph Building, 401, Dulany Street, Alexandria, VA 22314.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Ricardo Osorio
PRIMARY EXAMINER
Technology Division: 2629

RLO
July 23, 2006